



HD110C Heavy-Duty Digital Multimeter

Key features:

- Measures 1500 VDC
- CAT IV 1000 V
- IP67 Rated
- Magne-Grip™ holster with magnetic hanging strap

- Highest voltage capability, measuring to 1500 V dc and 1000 V ac
- CAT IV 1000 V rated
- Special sealing for environment and water resistance. IP67 rated
- Constructed with drop-resistant housing and PCB mounting
- Magne-Grip™ holster, frees both hands for work
- Includes high voltage test leads with threaded alligator clips

The HD110C is designed for professional use in harsh environments. The meter is unusually rugged and reliable in everyday heavy use applications. The meter is made using waterproof construction to prevent dirt, grime and moisture from entering the case and causing inaccurate readings or damaging shorts.

Built of tough, fire-retardant thermoplastic resistant to grease and chemical spills, with all sensitive components shock-mounted for a drop resistant to at least eight feet.


HD110C has an extended voltage measurement capability of 1500 V dc and 1000 V ac, unmatched by any other line of digital multimeters. The extended voltage ranges can withstand transients up to 12 kV.



HD110C



General Specifications

| | |
|--------------------------------------|--|
| Display | 3-1/2 digit LCD, 1999 counts, with annunciators and menu features |
| Polarity Indication | Automatic |
| Input overload indication | 1 |
| Low Battery Indication |  ; < 50 hours battery life remain, accuracy is no longer guaranteed |
| Display Update Rate | 2.5/sec, nominal |
| Oper. Temp. | 0 °C to +50 °C, (< 75 % R.H.) |
| Storage Temp | -20 °C to 60 °C, 0 to 80 % RH, battery removed |
| Temperature coefficient | 0.1 x (spec. accuracy)/°C (0 ° to 18 °C and 28° to 50 °C) all functions and ranges except for mVDC 0.3 x (spec. accuracy)/°C (0 ° to 18 °C and 28° to 50 °C) for mVDC |
| Altitude | Up to 2000 m — indoor use |
| Fuse | F 2 A/1500 V fuse (8 mm x 65 mm), I.R. 30 kA – Amprobe® p/n FP700 |
| Power | Standard 9 V battery, NEDA 1604, JIS 006P, IEC 6F22 |
| Auto Power-Down | Meter powers down after approx. 30 min. of inactivity. |
| Battery Life | 250 hours typical with carbon-zinc, 500 hours typical with alkaline |
| Dimensions, with holster (H x W x D) | 200 x 102 x 59 mm (7.9 in x 4.0 in x 2.3 in) |
| Weight (incl. battery) | 642 g (20 oz) |
| Accessories | Heavy Duty CAT IV 1000 V Test leads with threaded alligator clips (TL1500), battery (in instrument), hex wrench in holster, Magne-Grip flex strap and User Manual |
| Case material | Flame retardant, high-impact thermoplastic |
| Safety | Meets EN 61010-1 CAT IV 1000 V (1500 V DC max) Class II, EN 60529:IP67 |
| EMC | Meets EN 61326-1 |

Electrical Specifications *(Accuracies at 23 °C ± 5 °C, <75 % RH non-condensing, guaranteed for one year.)*

| Function | Range | Accuracy |
|----------------------------------|---|---------------------|
| DC Volts | | |
| Ranges | 200 mV, 2 V, 20 V, 200 V, 1500 V | |
| Resolution | 0.1 mV | |
| Accuracy | All ranges | ±(0.1 % rdg+2 dgts) |
| Input Impedance | 10 MΩ | |
| OL Protection | 1500 V dc/1000 V ac rms | |
| Transient Protection | 12 kV impulse (1.2 μS/50 μS) based on EN 61010-1:2001 impulse requirement for at CAT IV 1000 V product. This product should not be used in installations where transients exceed 12 kV. | |
| AC Volts (45 Hz to 2 kHz) | | |
| Ranges | 200 mV, 2 V, 20 V, 200 V, 1000 V | |
| Resolution | 0.1 mV | |
| Accuracy | 200 mV to 200 V (45-500 Hz) | ±(0.8 % rdg+4 dgts) |
| | 200 mV to 200 V (500 Hz-2 kHz) | ±(1.5 % rdg+5 dgts) |
| | 1000 V (50-60 Hz) | ±(0.8 % rdg+4 dgts) |
| | 1000 V (60-500 Hz) | ±(1.5 % rdg+5 dgts) |
| Input Impedance | 10 MΩ | |
| OL Protection | 1500 V dc/1000 V ac rms | |
| Transient Protection | 12 kV impulse (1.2 μS/50 μS) based on EN 61010-1:2001 impulse requirement for at CAT IV 1000 V product. This product should not be used in installations where transients exceed 12 kV. | |
| DC Current | | |
| Ranges | 200 μA, 2 mA, 20 mA, 200 mA, 2 A | |
| Resolution | 0.1 μA | |
| Accuracy | 200 μA to 20 mA | ±(0.5 % rdg+2 dgts) |
| | 200 mA to 2 A | ±(1.0 % rdg+2 dgts) |

HD110C Technical Specifications (continued)

| Function | Range | Accuracy |
|------------------------------------|---|--|
| DC Current (cont.) | | |
| Voltage Burden | 250 mV max. (1 mV/1 μ A on 200 μ A Range) (100 mV/1 mA on 2 mA Range) (10 mV/1 mA on 20 mA Range) (1.5 mV/1 mA on 200 mA Range) (500 mV/1 A on 2 A Range) | |
| OL Protection | A Input (F 2 A/1500 V, size 8 x 65 mm IR fast blow ceramic) (FP 700) | |
| AC Current (45 Hz to 1 kHz) | | |
| Ranges | 200 μ A, 2 mA, 20 mA, 200 mA, 2 A | |
| Resolution | 0.1 μ A | |
| Accuracy | 200 μ A to 20 mA 200 mA to 2 A | \pm (0.8 % rdg+4 dgts) \pm (1.2 % rdg+4 dgts) |
| Voltage Burden | 250 mV max. (1 V on 2 A range) | |
| OL Protection | same as DC Current | |
| Resistance | | |
| Ranges | 200 Ω , 2 k Ω , 20 k Ω , 200 k Ω , 2 M Ω , 20 M Ω | |
| Resolution | 0.1 Ω | |
| Accuracy | 200 Ω 2 k Ω to 200 k Ω 2 M Ω 20 M Ω | \pm (0.5 % rdg+4 dgts) \pm (0.3 %rdg+2 dgts) \pm (1.0 % rdg+4 dgts) \pm (2.0 %rdg+4 dgts) |
| OL Protection | 1500 V dc/1000 V ac rms | |
| Open Circuit Voltage | 200 Ω range all other ranges | 3.0 V dc typical 0.3 V dc typical. |
| Diode/Continuity Test | | |
| Test Current | 1m A dc typical | |
| Test/Open Circuit Voltage | 3.0 V dc Typical | |
| Diode Accuracy | \pm (1.5 % rdg+2 dgts) | |
| Continuity Audible Threshold | <50 Ω \pm 25 Ω | |
| Response Time | <100 msec | |
| OL Protection | 1500 V dc/1000 V ac rms | |